

ACCESSION NA: AP4031169

SUBMITTED: 30Oct63

DATE ACQ: 07May64

ENCL: 00

SUB CODE: PH

NO REF SOV: 003

OTHER: 001

Card 3/3

ACCESSION NR: AP4037597

S/0056/64/046/005/1823/1828

AUTHOR: Andreyev, A. F.

TITLE: Thermal conductivity of the intermediate state of superconductors

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 5, 1964, 1823-1828

TOPIC TAGS: superconductivity, thermal conductivity, temperature jump, electron mean free path

ABSTRACT: To explain the character of the reflection of the electrons from the separation boundary between the normal and superconducting phases in a superconductor, which has been suggested as possibly explaining the temperature drop occurring when heat flows in the superconductor, and which has not been explained hitherto, it is shown that an effect similar to above-the-barrier reflection of quasiparticles occurs on the separation boundary, and that the probability

Card 1/4

ACCESSION NR: AP4037597

of this reflection is of the order of unity, in spite of the fact that the ratio of the width of the transition layer to the wavelength of the quasiparticles is quite large ($\sim 10^4$). Consequently, in the presence of heat flow, a temperature discontinuity occurs on each of the boundaries, and this gives rise to the observed additional thermal resistance in the intermediate state. This additional thermal resistance is calculated and is shown to increase exponentially with decreasing temperature and to be independent of the electron mean free path. The latter results are in contradiction with the work of S. Strassler and P. Wyder (Phys. Rev. Let. v. 10, 225, 1963) and agrees with the data of N. V. Zavaritskiy (ZhETF v. 38, 673, 1960). "In conclusion I thank A. A. Abrikosov, L. T. Gor'kov, I. Ye. Dzyaloshinskiy, L. F. Pitayevskiy, and I. M. Khalatnikov for a useful discussion of the work and for valuable remarks." Orig. art. has: 16 formulas and 1 figure.

ASSOCIATION: Institut fizicheskikh problem Akademii nauk SSSR

Card 2/4

ACCESSION NR: AP4037597

(Institute of Physics Problems, Academy of Sciences SSSR)

SUBMITTED: 27Nov63

DATE ACQ: 09Jun64

ENCL: 01

SUB CODE: EM, GP

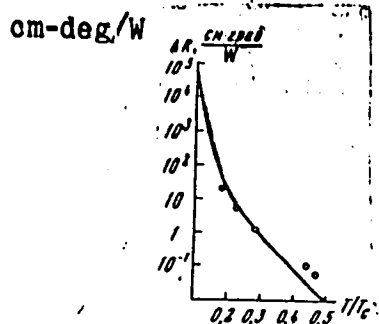
NR REF SOV: 006

OTHER: 005

Card 3/4

ACCESSION NR: AP4037597

ENCLOSURE: 01



Increase in thermal resistance as a function of the temperature ratio, for a sample of tin (curve - theory, points - experimental data of N. V. Zavaritskiy)

Card 4/4

L 22183-65 EEO(b)2/EWT(1)/EEO(f)/EWA(d) ASDA-5/AFWL/SSD/BSB/ASMP-2/ESDT

IJP(e) 00

ACCESSION NR: AP5001845

8/056/64/047/006/2222/2228

AUTHOR: Andreyev, A. F.

TITLE: Thermal conductivity of the intermediate state of superconductors. II.

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 6, 1964, 2222-2228

TOPIC TAGS: superconductivity, thermal conductivity, superconductor lamellar intermediate state, superconductor filamentary intermediate state

ABSTRACT: The first part of the paper was published in ZhETF v. 46, 1823, 1964. The aim of the second part is to show that the unusual character of the reflection of excitations leads to distinctive peculiarities of the heat conductivity of superconductors in the intermediate state, when the heat transfer takes place along the interfaces between the phases. To this end, the author calculates the coefficients of thermal conductivity of the lamellar and filamentary structures of the intermediate state, assuming that the heat transfer occurs along the along the interfaces between the phases, for the case where the electron mean free path

Cord 1/2

L 22183-65

ACCESSION NR: AP5001845

(l) is appreciably longer than the characteristic dimensions of the normal regions (a). It is shown that in the case of the lamellar structure the main contribution to the thermal conductivity is made by excitation moving parallel to the interfaces. In the filamentary case the main contribution comes from excitations moving at small angles to the filament axis. The coefficient of thermal conductivity of the lamellar structure is independent of the electron mean free path, whereas that of the filamentary structure decreases with increasing l like $\ln(l/a)/l$. "I thank A. A. Abrikosov and I. M. Khalatnikov for a useful discussion of the work." Orig. art. has: 42 formulas.

ASSOCIATION: Institut fizicheskikh problem Akademii nauk SSSR (Institute of Physical Problems, Academy of Sciences SSSR)

SUBMITTED: 18Jun64

ENCL: 00

SUB CODE: GP

NR REF SOV: 005

OTHER: 003

Cord 2/2

ANDREYEV, A.F.

Number of operations required in studying the singular point
of a differential equation using Frommer's method. Dif. urav.
1 no.9:1155-1176 S '65. (MIRA 18:10)

1. Leningradskiy institut tochnoy mekhaniki i optiki.

L 5338-66 EWT(1) IJP(c) GG
ACCESSION NR: AP5021131

UR/0056/65/049/002/0655/0660

AUTHOR: Andrevey, A. F. 44/25

TITLE: Electron spectrum of the intermediate state of superconductors 27.44.55

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 2, 1965, 655-660

TOPIC TAGS: superconductivity, electron spectrum, critical point, specific heat, electron energy level, thermodynamic property

ABSTRACT: The author determines the spectrum of low-lying energy levels of electronic excitations in superconductors in the intermediate state. It is assumed that the electronic excitations have energies that are small compared with the critical temperature of the superconducting transition in the absence of a magnetic field. It is shown that at energies on the order of v/a (v = Fermi velocity, a = thickness of normal layer) the quantization of the low-lying energy levels furnishes important information on the thermodynamic and other properties of the intermediate state. Expressions are obtained for the free energy of the normal layer; for the number of levels, for the normal magnetic field, and for the total free energy and the specific heat per unit volume of the intermediate state. The results show that at temperatures close to v/a the temperature dependence of the

Card 1/2

00011136

L 5338-66

ACCESSION NR: AP5021131

12

thermodynamic quantities characterizing the intermediate state experience a radical change, although the quantization of the energy levels of the electronic excitations can produce noticeable effects also at higher temperatures. "I am grateful to I. Ye. Dzyaloshinskiy, L. P. Pitayevskiy, and I. M. Khalatnikov for useful discussions." ^{44,55} Orig. art. has: 25 formulas. ^{44,55}

ASSOCIATION: Institut fizicheskikh problem Akademii nauk SSSR (Institute of Physics Problems, Academy of Sciences, SSSR)

SUBMITTED: 10Mar65

ENCL: 00 ^{44,55}

SUB CODE: SS, TD

NR REF SOV: 003

OTHER: 001

Card 2/2 *MD*

ACC NR: AP6037081

SOURCE CODE: UR/0056/66/051/056/1510/1521

AUTHOR: Andreyev, A. F.

ORG: Institute of Physics Problems, Academy of Sciences, SSSR (Institut Fizicheskikh problem Akademii nauk SSSR)

TITLE: Electrodynamics of the intermediate state of superconductors

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 51, no. 5, 1966, 1510-1521

TOPIC TAGS: superconductivity, electrodynamics, electromagnetic property, resistivity, surface property, *superconductor*

ABSTRACT: The author obtains a complete system of macroscopic equations describing the electromagnetic properties of the intermediate state of a superconductor of the first kind at low temperatures. These equations are used to determine the dc resistance of the superconductor. In a weak current, the resistance of the intermediate state is equal to the resistance of the normal phase multiplied by its concentration. With increasing current, the influence of the magnetic field on the structure of the intermediate state becomes important and the resistance becomes dependent on the current, reaching ultimately the characteristic of the pure normal metal. In the calculation of the resistance, the effect of the magnetic field produced by the current on the intermediate-state structure is taken into account. It is shown that the electromagnetic wave, similar to a helicon in a normal metal, can propagate in the

Card 1/2

ACC NR: AF6037081

intermediate state of superconductors having unequal numbers of electrons and holes. The frequency of the possible helicon-like oscillations is estimated at $\sim 10^3 - 10^4$ sec⁻¹, corresponding to a wave propagation velocity of 10 - 100 cm/sec. The surface impedance of the intermediate state in an alternating external field is calculated. The author thanks I.Ye. Dzyaloshinskiy, L. P. Pitayevskiy, I. M. Khalatnikov, and Yu. V. Sharvin for useful discussions and valuable remarks. Orig. art. has: 25 formulas.

SUB CODE: 20/ SUBM DATE: 31May66/ ORIG REF: 008/ OTH REF: 008

Card 2/2

March 1, 1954.

"An investigation of the behavior of a system of two differential equations in the neighborhood of a singular point." Anna Phys-Math Sci, Mathematics Inst. Henri Poincaré, Moscow, U.S.S.R. Dissertation (referencing Zhurnal--International Moscow, Feb 54)

Dr. G. I. G. I. G. I. G.

ANNLEYEV, A. P.

Solution of the Problem of Center and Focus in a Certain Case, A.P. Annleyev, Leningrad. Prikl. Mat. i Mekh, Vol. 17, No. 3, pp. 333-337, May/Jun 63

Discusses the nonlinear system $dx/dt = y + Ax^3 + Bx^2 + Cxy^2 + Dy^3$, $dy/dt = -x + Lx^3 + Mx^2y + Nxy^2 + Oy^3$. Demonstrates that in order that origin of coordinates be the center of this system it is necessary and sufficient that the system satisfy the following conditions: $K < 0$, $3A + L = 0$, $2A(B + K) + K(C + 3N) = 0$, $(K + N)(CA^3 - ANN - K^2L) = 0$. Cites related works of N.A. Sakhar'nikov ("Poincaré's Conditions for the Existence of Center," ibid, Vol. 12, No. 5, 1948; "Solution of the Problem of Center and Focus in a Certain Case," ibid, Vol. 14, No. 6, 1950).

250731

ANDREYEV, A. F.

Andreyev, A. F. Investigation of the behavior of the integral curves of a system of two differential equations in the neighborhood of a singular point. Vestnik Leningrad Univ. 10 (1935), no. 8, 43-65. (Russian)
This is a detailed study of the local phase-portrait at the origin of a real system

T-874

608

$$(1) \quad \frac{dx}{dt} = X(x, y), \quad \frac{dy}{dt} = Y(x, y),$$

where X, Y are real convergent power series beginning with terms of degree at least two. Every analytical system with the origin as isolated singularity, terms of the first degree not all zero but with both characteristic roots zero, may be reduced to the type (1) by a linear transformation of coordinates. Such a system was already investigated, strictly for stability, by Lyapunov (Mat. Sb. 17 (1893), 253-333—supplement (pp. 369-449) to "General problem of the stability of motion, Gostekhizdat, Moscow, 1950, MR 12, 612). The author applies extensively the method of Poincaré (Math. Ann. 99 (1928), 222-272) and obtains essentially eight phase-portraits. He also gives analytical expressions for the trajectories tending to the origin. S. Lefschetz (Princeton, N. J.).

SNW

AUTHOR: Andreyev, A.F.

43-58-13-7/13

TITLE: On the First Problem of Distinction in the Theory of Frommer
(O pervoy probleme razresheniya v teorii Frommera)

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki,
mekhaniki i astronomii, 1958, Nr 13(3), pp 84-86 (USSR)

ABSTRACT: The author considers the equation

$$(1) \quad \frac{dy}{dx} = \frac{Q(x,y) + q(x,y)}{P(x,y) + p(x,y)}$$

$P(x,y)$ and $Q(x,y)$ are homogenous polynomials of the degree $n \geq 1$ in x and y with real coefficients. The real functions $p(x,y)$ and $q(x,y)$ are defined in D : $0 \leq r < R^*$, $r^2 = x^2 + y^2$, and satisfy any conditions which guarantee a unique solution of the Cauchy problem $x = x^0$, $y = y^0$ for $t = 0$, $x^0, y^0 \in D$ for the system $\dot{x} = P(x,y) + p(x,y)$, $\dot{y} = Q(x,y) + q(x,y)$. Furthermore it is $p(x,y) = O(r^n)$ and $q(x,y) = O(r^n)$ for $r \rightarrow 0$.
Let

$$(2) \quad r \frac{d\varphi}{dr} = \frac{F(\varphi) + f(r,\varphi)}{\Gamma(r,\varphi)},$$

Card 1/3

On the First Problem of Distinction in the Theory of Frommer 43-58-13-7/13

where

$$G(\varphi) = P(\cos \varphi, \sin \varphi) \cos \varphi + Q(\cos \varphi, \sin \varphi) \sin \varphi$$

$$F(\varphi) = Q(\cos \varphi, \sin \varphi) \cos \varphi - P(\cos \varphi, \sin \varphi) \sin \varphi$$

$$\Gamma(r, \varphi) = \Phi(\varphi) + g(r, \varphi),$$

be the equation (1) in polar coordinates.

Here let

$$F(0) = F'(0) = \dots = F^{(k-1)}(0) = 0$$

$$F^{(k)}(0) \cdot G(0) < 0,$$

where k is odd.

Furthermore let $g(r, \varphi)$ satisfy the Lipschitz condition in φ in a domain $N_2 : 0 < r \leq R, -\Delta \leq \varphi \leq \Delta$ with sufficiently small R and Δ .

Under the given assumptions the following theorem is valid:

In order that (2) possesses a single solution

$$(3) \quad \varphi = \varphi_1(r), \quad \varphi \rightarrow 0 \text{ for } r \rightarrow 0,$$

Card 2/3

On the First Problem of Distinction in the Theory of Frommer

43-58-13-7/13

it is sufficient that the equation

$$r \frac{d\varphi}{dr} = \frac{F(\varphi_1(r))}{\Gamma(r, \varphi_1(r))} + \frac{f(r, \varphi)}{\Gamma(r, \varphi)}$$

admits only the solution (3).

As a conclusion of this theorem the author obtains certain conditions which have to be satisfied by p, q, f, g in order that in the initial point there ends a single integral curve of (1) with the direction $\varphi = 0$.

There are 4 references, 2 of which are Soviet and 2 German.

SUBMITTED: February 25, 1957

1. Mathematics--Theory

Card 3/3

AUTHOR: Andreyev, A.F., Bogdanov, Yu.S. SOV/42-13-3-4/41

TITLE: On the Continuous Dependence of the Solution of the Cauchy Problem from the Initial Conditions (O nepreryvnoy zavisimosti resheniya zadachi Koshi ot nachal'nykh dannyykh)

PERIODICAL: Uspekhi Matematicheskikh Nauk, 1958, Vol 13, Nr 3, pp 165-166 (USSR)

ABSTRACT: By the functions of a family X let $T = [0, 1]$ be mapped onto a locally compact metric space P , let $T \times P = Q$. Defining X by a continuous differential system, then from the uniqueness of the solution of the Cauchy problem in X for arbitrary initial conditions of Q there follows the continuous dependence of the curves of X on the initial conditions. Myshkis and Grinfel'd [Ref 2] showed that if P is onedimensional, then this continuous dependence exists too if X cannot be defined by a continuous system; further that this continuous dependence is satisfied also "in all natural" boundary problems where the problem is examined. At the same time for $n = 2$ they gave an example where this continuous dependence is no longer valid. They put the question which property of the

Card 1/2

On the Continuous Dependence of the Solution (Cont.) SOV/42-13-3-4/41

"natural" boundary value problems in this special example is not satisfied and causes the discontinuity of the dependence on the initial conditions. The authors assert that this property is the local compactness of the set X . There are 2 Soviet references.

SUBMITTED: February 12, 1957

Card 2/2

ANDREYEV, A.F.

Integral curves with zero and infinite measures of curvature.
Dokl. AN BSSR 3 no.5:186-189 My '59. (MIRA 12:10)

1. Predstavleno akademikom AN BSSR N.P. Yeruginym.
(Differential equations)

16(1)

AUTHOR: Andreyev, A.F.

SOV/43-59-7-2/17

TITLE: On the First Decision Problem in the Theory of Frommer (O pervoy probleme razlicheniya v teorii Frommera)

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki, mekhaniki i astronomii, 1959, Nr 7(2), pp 18-25 (USSR)

ABSTRACT: Given the equation

$$(1) \quad \frac{dy}{dx} = \frac{Q(x,y)+q(x,y)}{P(x,y)+p(x,y)}$$

or in polar coordinates

$$(2) \quad r \frac{d\varphi}{dr} = \frac{F(\varphi)+f(r,\varphi)}{G(\varphi)+g(r,\varphi)}.$$

In the development $F(\varphi) = C\varphi^k + c_1\varphi^{k+1} + \dots$ let k be arbitrarily odd. Without assuming the analyticity of $p(x,y)$, $q(x,y)$ the author gives sufficient conditions that (2) has only the unique solution $\varphi = \varphi_1(r)$ ($\varphi_1 \rightarrow 0$ for $r \rightarrow 0$). Very numerous assumptions are made. A class of functions p and q is given for which the

Card 1/2

On the First Decision Problem in the Theory of Frommer SOV/43-59-7-2/17
uniqueness of the solution does not depend on the multiplicity
of the singular direction. The author mentions M.Frommer
[Ref 1] and N.B.Khaimov.
There are 5 references. 2 of which are Soviet, 1 Italian, and
2 German.

SUBMITTED: June 28, 1957

Card 2/2

ANDREYEV, A.F.

Investigating a particular point of a differential equation of the
1st order in a singular case. Dokl. AN BSSR 4 no.8:325-327 Ag
'60. (MIRA 13:8)

1. Matematicheskiy institut AN BSSR, Predstavleno akad. AN BSSR
N.P.Yeruginym.

(Differential equations)

16.5600

89495
S/043/60/000/001/001/014
C 111/ C 333

AUTHOR: Andreyev, A. F.

TITLE: On integral curves with zero or infinite measures of curvature

PERIODICAL: Leningrad. Universitet. Vestnik. Seriya matematiki, mekhaniki i astronomii, no. 1, 1960, 1-13

TEXT: The author considers the equation

$$\frac{dy}{dx} = \frac{P(x,y)}{Q(x,y)} \quad (1)$$

where P and Q are series in terms of integer powers of x and y which converge in a certain neighborhood of (0,0) and vanish in (0,0). Let $1 \leq \nu < +\infty$ be the possible order of curvature of the integral curves reaching the singular point (0,0). After the transformation $y = u(x) x^\nu$ (1) is transformed into

$$\frac{du}{dx} = \frac{x^{\nu-1} [P_1(u) + x^{\lambda_1} R_1(x,u)]}{x^{\nu-1} [P_2(u) + x^{\lambda_2} R_2(x,u)]} \quad (2)$$

Card 1/4

89495

S/043/60/000/001/001/014
C 111/ C 333

On integral curves with zero ...

where $l_1, l_2, \lambda_1, \lambda_2$ are positive numbers,

$$P_1(u) = \sum_{i=m_1}^{n_1} a_i^{(1)} u^i, \quad P_2(u) = \sum_{i=m_2}^{n_2} a_i^{(2)} u^i$$

and $R_1(x,u), R_2(x,u)$ are analytic functions in u and quasi-analytic functions in x .

Theorem 1: Assume that the equation (2) satisfies one of the conditions:

1.) $l_1 \neq l_2 - 1$ or 2.) $l_1 = l_2 - 1, m_1 \leq m_2 + 1$ or 3.) $l_1 = l_2 - 1, m_1 > m_2 + 1, m_1 - m_2$ odd, $a_{m_1}^{(1)} a_{m_2}^{(2)} < 0$. Then (1) possesses no integral curves in $x \geq 0$ which reach $(0,0)^2$ with the order of curvature λ or with zero measure of curvature. In other cases

Card 2/4

On integral curves with zero . . . 89495
S/043/60/000/001/001/014
C 111/ C 337

$$l_1 = l_2 - 1, m_1 > m_2 + 1 \quad \begin{matrix} (1) & (2) \\ a_{m_1} & a_{m_2} \end{matrix} > 0 \quad (3)$$

b.) $m_1 - m_2$ even

it possesses an infinite number of such integral curves.

Theorem 2: Let the equation (2) satisfy one of the conditions:

- 1.) $l_1 \neq l_2 - 1$, or
- 2.) $l_1 = l_2 - 1, n_1 \geq n_2 + 1$, or
- 3.) $l_1 = l_2 - 1, n_1 < n_2 + 1, n_2 - n_1$ odd, $a_{n_1}^{(1)} a_{n_2}^{(2)} > 0$. (19)

Then (1) possesses no integral curves in $x \geq 0$ which reach the point $(0,0)$ with the order of curvature ν and with infinite measure of curvature. In other cases

- $$l_1 = l_2 - 1, n_1 < n_2 + 1, \quad \begin{matrix} a.) & n_2 - n_1 & \text{odd, } a_{n_1}^{(1)} a_{n_2}^{(2)} < 0 \\ b.) & n_2 - n_1 & \text{even} \end{matrix} \quad (20)$$

Card 3/4

89495

S/043/60/000/001/001/014
C 111/ C 333

✓

On integral curves with zero ...

there exists an infinite number of such integral curves.

The author mentions J. S. Kukles. There are 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc.

SUBMITTED: September 19, 1958

Card 4/4

21899

16.3400

S/043/60/019/004/002/015
C 111/ C 333

AUTHOR: Andreyev, A. F.

TITLE: Frommer's Method and one of its Applications

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki, mekhaniki i astronomii, 1960, Vol. 19, No. 4, pp. 37-51

TEXT: The author considers the equation

$$(1.3) \quad \frac{dy}{dx} = \frac{1}{y} \{ [a + f(x)] x^{\alpha} + [b + \varphi(x)] x^{\beta} y + \psi(x, y) y^2 \}$$

- where 1.) α, β , a and b are real constants, $\alpha > 0$, $\beta > 0$, $a \neq 0$, $b \neq 0$, if $\alpha \geq 2\beta + 1$;
2.) $f(x)$ and $\varphi(x)$ are defined on $0 \leq x < x^*$ and continuous; $f(0) = \varphi(0) = 0$;
3.) $\psi(x, y)$ is defined and continuous in $0 \leq x < x^*$, $|y| < y^*$ and there satisfies the Lipschitz condition in y

The author shows that the topological structure of the integral curves of (1.3) in the right semineighborhood of (0,0) is generally determined by a, b, α and β . In the exceptional case:

Card 1/3

84899

S/043/60/019/004/002/015

C 111/ C 333

Frommer's Method and one of its Applications

$$\alpha = 2\beta + 1, \quad b^2 + 4a(\beta + 1) = 0,$$

however, the form of the integral curves depends on $f(x)$ and $\varphi(x)$, and that: if for sufficiently small $x > 0$ and v it is

$$(4.18) \quad \left\{ f(x) + \left[\frac{b}{2(\beta+1)} - v \right] \varphi(x) \right\} \leq \frac{c_1}{\ln^2 x}, \quad 0 < c_1 < \\ < \frac{b^2}{16(\beta+1)^3}.$$

then (1.3) possesses in the half plane $x > 0$ infinitely many solutions of the form

$$(4.14) \quad y = \frac{b}{2(\beta+1)} x^{\beta+1} + o(x^{\beta+1});$$

if, however, for sufficiently small $x > 0$ and v it is

Card 2/3

84899

S/043/60/019/004/002/015

C 111/ C 333

Frommer's Method and one of its Applications

$$(4.19) \quad \left\{ f(x) + \left[\frac{b}{2(\beta+1)} - v \right] \varphi(x) \right\} \geq \frac{c_2}{\ln^2 x}$$

$$c_2 > \frac{b^2}{16(\beta+1)^3}$$

X

then such solutions do not exist.

There are 7 references: 3 Soviet, 1 American, 1 French, 1 Italian
and 1 German

Card 3/3

ANDREYEV, A.F.

Frommer's method of investigating a singular point of a differential
equation of the first order. Vest. LGU 17 no.1:5-21 '62.
(MIRA 15:1)

(Differential equations)

34464

S/020/62/142/004/001/022
B112/B102

16.3500

AUTHOR: Andreyev, A. F.

TITLE: Uniqueness theorem for a Frommer normal domain of the second type

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 142, no. 4, 1962, 754 - 757

TEXT: It is demonstrated that the equation

$$\alpha(r) \partial \varphi / \partial r = \phi(\varphi) (1 + \beta(r, \varphi)) + \psi(r, \varphi) = \gamma(r, \varphi)$$

has an unambiguous 0-curve in the domain $0 < r \leq \rho$, $-\delta \leq \varphi \leq \delta$ if the following conditions are fulfilled: 1) The conditions of the theorem of P. Hartman and A. Wintner (see below).

2) $\psi(r, \varphi) / \omega(r) \rightarrow 0$ for $r \rightarrow 0$, $\omega(r) \in C^1$, $\omega(r) > 0$, $\omega'(r) > 0$, $\omega(r) \rightarrow 0$ for $r \rightarrow 0$.
3) $|\varphi| \leq u_0 \omega^{1/k}(r)$, $u_0 > 0$, $\psi(r, \varphi_2) - \psi(r, \varphi_1) \leq \frac{1}{k} \Lambda(r) (\varphi_2 - \varphi_1)$ for $\varphi_2 > \varphi_1$, $\Lambda(r) \leq \alpha(r) \omega'(r) / \omega(r)$.

There are 11 references: 9 Soviet and 2 non-Soviet. The reference to the Card 1/2

L 36250-66 EWT(1)/ENF(m)/EEC(k)-2/T/ENI(k) IJR(c) WG,AG

ACC NR: AP6023632

SOURCE CODE: UR/0386/66/004/001/0007/0011

AUTHOR: Andreyev, A. F.

ORG: Institute of Physics Problems, Academy of Sciences SSSR (Institut fizicheskikh problem Akademii nauk SSSR)

TITLE: Oscillations of the intermediate state of superconductors 21

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 4, no. 1, 1966, 7-11

TOPIC TAGS: superconductivity, phase transition, relaxation process, quantum oscillation, indium, tin

ABSTRACT: The article deals with the ²¹relaxation of ²¹perturbations that may be produced in a metal intermediate between the normal and superconducting states, following a perturbation that distorts the stratified structure (alternating layer of superconducting and normal metal). The equation of motion of the interphase boundaries is derived with allowance for the conditions that must be satisfied by Maxwell's equations on the boundaries, and it is shown that the relaxation is accompanied by damped oscillations whose wavelength is much larger than the thickness of the normal-phase layer and whose damping takes place over a distance of the order of the wavelength. The spectrum of these oscillations is very similar to the spectrum of helicon waves. The derivations used in the article make it also possible to solve the problem of the motion of a curved filament of normal phase in the superconductor, and explains some

Card 1/2

L 36250-66

ACC NR: AP6023632

2

differences between the superconductivity of indium and of tin. Orig. art. has: 8
formulas.

SUB CODE: 20/ SUBM DATE: 21Apr66/ ORIG REF: 004/ OTH REF: 004

Card 2/2 *ll*

L 36461-66 EWT(1) IJP(c) GG/WW

ACC NR: AP6018822 SOURCE CODE: UR/0056/66/050/005/1420/1424

AUTHOR: Andreyev, A. F.; Bruk, Yu. M.

ORG: Institute of Physical Problems, Academy of Sciences SSSR
(Institut fizicheskikh problem Akademii nauk SSSR)

TITLE: Sound absorption in the intermediate state of superconductors

SOURCE: Zh. eksper. i teor. fiz. v. 50, no. 5, 1966, 1420-1424

TOPIC TAGS: superconductor, sound absorption, heat absorption, sound propagation, intermediate frequency, eddy current

ABSTRACT: Propagation of sound in the intermediate state is accomplished by movement of the interface between the phases. As a result, eddy currents appear in the normal layers. The Joule heat which is liberated in this case leads to additional absorption of sound. It is shown that at low acoustical frequencies ($\delta \gg a$ where δ is the skin-layer thickness and a is the spacing of the intermediate state structure) the absorption is proportional to the square of the frequency, and at not very small values of a , it exceeds the ordinary absorption attributed

Card 1/2

L 36461-66

ACC NR: AP6018822

to the electron viscosity. At high frequencies ($\delta \ll a$), the additional absorption is proportional to the square root of the frequency. Orig. art. has: 19 formulas. [Based on authors' abstract] [AM]

SUB CODE: 20/ SUM DATE: 09Dec65/ ORIG REF: 004/ OTH REF: none

Card 2/2 *JS*

L 41607-66 EWT(m)/SWP(t)/ETI IJP(c) JD

ACC NR: AP6018821

SOURCE CODE: UR/0056/66/050/005/1415/1419

AUTHOR: Andreyev, A. F.ORG: Institute of Physics Problems, Academy of Sciences, SSSR (Institut fizicheskikh problem Akademii nauk SSSR)TITLE: Surface tension¹⁷ of weak solutions of helium isotopesSOURCE: Zh eksper i teor fiz, v. 50, no. 5, 1966, 1415-1419TOPIC TAGS: liquid helium, surface tension, Hamiltonian, impurity level, *isotope*

ABSTRACT: The author shows that the quantum character of liquid He^4 at low temperatures makes it possible to determine the change produced in its surface tension by dissolution of sufficiently small quantities of He^3 impurities. It is shown that at short distances from the surface the Hamiltonian acquires an additional coordinate-dependent term. An analysis of the equation for the wave function of the impurity with allowance for this term shows that the surface tension decreases with increasing impurity concentration if surface impurity levels are present, and increases if there are no such levels. Since available experimental data give grounds for assuming the existence of surface levels for the He^3 atom in liquid He^4 , it can be concluded that the change in the surface tension is negative in this case. The experimental data likewise indicate that there are no surface levels in solutions of He^4 in He^3 . The author thanks L. P. Gor'kov, I. Ye. Dzvaloshinskiy, and L. P. Pitayevskiy for a useful discussion. Orig. art. has: 21 formulas.

SUB CODE: 20/

SUBM DATE:

09Dec65/

ORIG REF:

007/

REF: 005

Cord

1/1

ABDUVALIYEV, A.; KHAYRUTDINOVA, M.Kh.; ANDREYEV, A.G.; SULTANOV, A.S.

Thermosetting resin from furfuryl alcohol and furfurola. Uzb.
khim. zhur. no.4:53-57 '58. (MIRA 11:12)

1. Institut khimii AN UzSSR.
(Resins, Synthetic) (Furfuryl alcohol) (Furaldehyde)

ABDUVALIYEV, A.A.; KHAYRUTDINOVA, M.Kh.; ANDREYEV, A.G.; SULTANOV, A.S.

Method for the production of glue for repairs of wires with
polyvinyl chloride insulation. Uzb. khim. zhur. no.3:72 '59.

(MIRA 12:9)

(Electric wire, Insulated--Maintenance and repair)

ANDREYEV, A.G., inzh.; LYSENKO, B.M. kand.tekhn.nauk

Calculation of the vane strength of a low-pressure adjustable
blade hydraulic turbine. Energ. mashinostroenie 7 no.6:24-26
Je '61. (MIRA 14:7)

(Hydraulic turbines)

ANDREYEV, A.G.; FILIPPOV, A.P.

Bending of a cantilever sector-shaped plate with variable rigidity.
Sbor.trud.Lab.gidr.mash. no.9:58-63 '61. (MIRA 15:3)
(Elastic plates and shells)

S/131/61/000/009/003/005
I034/I234

AUTHOR: Andreyev, A.G.

TITLE: Concerning the effects of uneven heating on stresses in turbine disks

SOURCE: Akademiya nauk Ukrain's'koyi RSR. Laboratoriya gidravlicheskikh mashin. Sbornik trudov, no. 9. 1961. 103-112.

TEXT: The increased dimensions of modern steam and gas turbines leads to increased stresses in their structural elements. Special importance attaches to temperature stresses in turbine disks. The influence of the disk profile and of the radial distribution pattern of temperature on the stresses are evaluated. This is done by juxtaposing the circumferential stresses at the rim and at the hub of disks of 3 different profiles (constant thickness, hyperbolic and conical) under four different laws of temperature distribution (linear, and 2nd, 3rd and 4th-power parabolas). General expressions are derived for circumferential temperature stresses on the outer and inner parts of disks and make possible the evaluation of the effects of disk form and temperature distri-

Card 1/2

Concerning the...

S/731/61/000/009/003/005
1034/1234

bution on maximum stresses. These are found to depend on the relative dimensions of the disk and on the exponent n of the temperature distribution law. Various interrelations are established and graphs are given for a rapid determination of stresses at the points of highest loading in the disks. There are 5 figures. The English-language reference reads:- K.E. Bisshopp, Stress Coefficients for Rotating Discs of Conical Profile, Journal of Applied Mechanics, Trans. ASME, vol. II, 1944.

Card 2/2

MESENZHNIK, Ya.Z., inzh.; ANDREYEV, A.G., inzh.

Flexible cable cables with aluminum current conducting strands.
Vest.elektroprom. 33 no.6:59-60 Je '62. (MIRA 15:7)
(Electric cables)

ANDREYEV, A.G.

Analysis and ways of improving working conditions in open
pits. Zap. LGI 46 no.1:52-54 '62. (MIRA 16:6)

(Strip mining—Hygienic aspects)
(Mine dusts)

L 34847-65 EWT(m)/EPF(c)/EMP(j) Pc-4/Pr-4 RM S/0286/65/000/006/0061/0061
ACCESSION NR: AP5008544
AUTHOR: Vasil'eva, N. V.; Stergiu, G. K.; Usmanov, Kh. U.; Nadol'skiy, Ya. V.; Kostyushko, G. A.; Andrejev, A. G.
TITLE: A method for vulcanizing rubber stock. Class 39, No. 169244
SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 6, 1965, 61
TOPIC TAGS: rubber vulcanization, polychloroprene latex
ABSTRACT: This Author's Certificate introduces a method for vulcanizing rubber stock based on polychloroprene. A vulcanizing group which contains a vulcanization accelerant is used. A wider selection of vulcanization accelerants is provided by using a product of the interaction of thiourea with hydrogen peroxide.
ASSOCIATION: none
SUBMITTED: 04Aug61 ENCL: 00 SUB CODE: MT, OC
NO REF SOV: 000 OTHER: 000
Card 1/1

ANDREYEV, A. G.; KONTOV, V. S.

Geology

"The Practice of Employing Reduction-Gear Pumping Jacks of the Standard Series",
Gostopkhizdat, 1948.

Summary No. 60, 26 May '52, BR-52056899

SO: Monthly List of Russian Accessions, Library of Congress, _____ 1953, Uncl.

ANDREEV, A.G.

ANDREEV, A.G. Practice of Moskva, Gostoptekhhizdat, 1948. 71 p.
(Biuro tekhniko-ekonomicheskoi informatsii TSIMT nefti. Obmen otechestvennym
opytom. Dobycha) (51-27959)

TN871.A748

ANDREEV, A.G.

ANDREEV, A.G. Repairing of deep pumps in industrial workshops Moskva, 1949
33 p. (Biuo tekhniko-ekonomicheskoi informatsii TSIMT nefi. Obmen
otchestvennym opytom. Dobycha) (51-27960)

TN871. A749

ANDREYEV, A.G.

25061 ANDREYEV, A.G. Uluchsheniye Priyemov Yarovizatsii Semyan Yarovoy I Oziimoy
Vikt I Vchet Vliyaniya ee na Kolichestvo Zelenoy Massy I Kachestvo Semyan.-
V Ogl: Andreyeva A.G. V SB: Voprosy Kormodobyvaniya . Vyp. 2.M., 1949, S. 105.

So: 1 etopis 'No 33, 1949

ANDREYEV, A.G.; MUSAYEV, I.M., redaktor; UDALYY, A.M., tekhnicheskiy re-
daktor.

[Small-size compressor lifts] Malogabaritnye kompressornye lifty.
Baku, Gos.nauchno-tekhn.izd-vo neftianoi i gorno-toplivnoi lit-ry,
Azerbaidzhanskoe otdelenie, 1950. 15 p. (MIRA 8:4)
(Oil wells--Gas lift)

ANDREYEV, A.G.; LAVRUSHKO, P.N., redaktor; BEKMAN, Yu.K., redaktor;
TROFIMOV, A.V., tekhnicheskii redaktor

[Engineer's manual on petroleum extraction] Spravochnik inzhenera po dobyche nefli. Moskva, Gos.nauchno-tekhn.izd-vo neflianoi i gorno-toplivnoi lit-ry, 1953. 173 p. (MIRA 9:2)
(Petroleum engineering)

ANDREYEV, A. G.

<p>PHASE I BOOK EXPLOITATION</p> <p>SOV/4896</p>	
<p>Moskovskiy dom nauchno-tekhnicheskoy promyshlennosti</p> <p>P. K. Dzerzhinskogo</p>	
<p>Automaticheskoye rotornyye izm.: - spetsialno vyeplyskoy avtomatizatsii proizvodstva. (Rotary-transfer-machine line) 223 p. 10,000 copies printed.</p>	
<p>Ed. I. M. Koshkin; Ed. of Publishing House: I. Yashin; Tech. Ed. I. O. V. Smirnova; Managing Ed. for literature on Metalworking and Machine-Tool Building: V. I. Melin, Engineer.</p>	
<p>PURPOSE: The book is intended for technical personnel in the machine- ery industry.</p>	
<p>COVERAGE: This collection of articles explains the principles of full automation based on the use of rotary transfer machines in various industries. The rotary transfer machines used for basic processing, assembly, and finishing operations and also the special power equipment and devices of these machines and (production) lines. No personalities are mentioned. There are no references.</p>	
<p>Koshkin, I. M. - Basic Problems in the Full Automation of Product Manufacture</p>	<p>62</p>
<p>Nodorenko, I. A. - Installation and Working Principle of Rotors for Inspection Operation</p>	<p>76</p>
<p>Machkov, Yu. A. - Rotors for Regular and "Hermetic" Coating</p>	<p>85</p>
<p>Mayord, P. Ye. - Design of Loose and Liquid Materials in Rotary Transfer Machine Lines</p>	<p>94</p>
<p>Grinberg, I. I. - Rotors for Assembling and Packing</p>	<p>108</p>
<p>Oslov, A. A. - Rotors for Transfer and Feeding</p>	<p>119</p>
<p>PART II. SPECIAL POWER EQUIPMENT AND DEVICES FOR ROTARY TRANSFER MACHINE LINES</p>	
<p>Andreyev, A. G. - Mechanical Rotors</p>	<p>133</p>
<p>Khelevskiy, V. V. - Hydraulic Drives for Rotors</p>	<p>148</p>
<p>Beljajev, A. M. - Electric Devices for Rotors (Used) for Inspection Gaging Operations</p>	<p>162</p>
<p>Pedotov, N. A. - High-Frequency Electric Equipment for Rotors (Used) for Heat Treatment</p>	<p>177</p>
<p>Zakharichikov, V. M. - Equipment for Rotors (Used) for Thermochemical Processing</p>	<p>185</p>
<p>PART III. SPECIAL ROTARY TRANSFER MACHINE LINES</p>	
<p>Savarex, V. M. - Automated Multiproduct Rotary Transfer Machine Line for Manufacturing of Plastic Articles</p>	<p>196</p>
<p>Chagin, V. P. - Assembly Line for 38 mm Pitch Roller Chains for Consoles</p>	<p>209</p>
<p>Sokolov, V. A. - Automatic Rotary Transfer Machine Line for the Manufacture of Welding Electrodes</p>	<p>219</p>
<p>AVAILABLE: Library of Congress (TJ1193.M6)</p>	
<p>Card 4/4</p>	<p>VK/cw/oa 8/24/81</p>

ANDREYEV, A.G.

Bending of a plate having the shape of a part of circular ring
fastened along the greater arched edge. Sbor.trud.Lab.gidr.mash.AN
URSR no.10:63-71 '62. (MIRA 15:12)

(Elastic plates and shells)

ANDREYEV, A.G., inzh.

Automation of metal-cutting operations on transfer-machine lines.
Vest.mashinostr. 42 no.6:50-53 Je '62. (MIRA 15:6)
(Machine tools) (Automation)

ANDREYEV, A.I.

The deglutition cardiac reflex in children. Vop.okh.mat. 1
det. 4 no.3:68-72 My-Je '58. (MIRA 12:8)

1. Iz Nauchno-issledovatel'skogo instituta okhrany materinstva
i detstva, Sofiya.
(DEGLUTITION) (HEART)

ANDR'YEV, A.I., starshiy nauchnyy sotrudnik (Sofiya)

Therapeutic and preventive role of training during the acute stage
of rheumatic fever in children. Med.sestra 17 no.3:28-30 Mr '58.
(RHEUMATIC FEVER) (PEDIATRIC NURSING) (MIRA 11:4)

ANDREYEV, A.I., starshiy nauchnyy sotrudnik

Effect of the emotions on the cardiovascular system in the acute
stage of rheumatic fever. Med.sestra 17 no.8:24-26 Ag '58

(MIRA 11:8)

1. Iz Nauchno-issledovatel'skogo instituta okhrany materinstva i detstva
Sofiya.

(CARDIOVASCULAR SYSTEM--DISEASES--PSYCHOSOMATIC ASPECTS)

ANDREYEV, Andrey Iv., doktor (Sofiya)

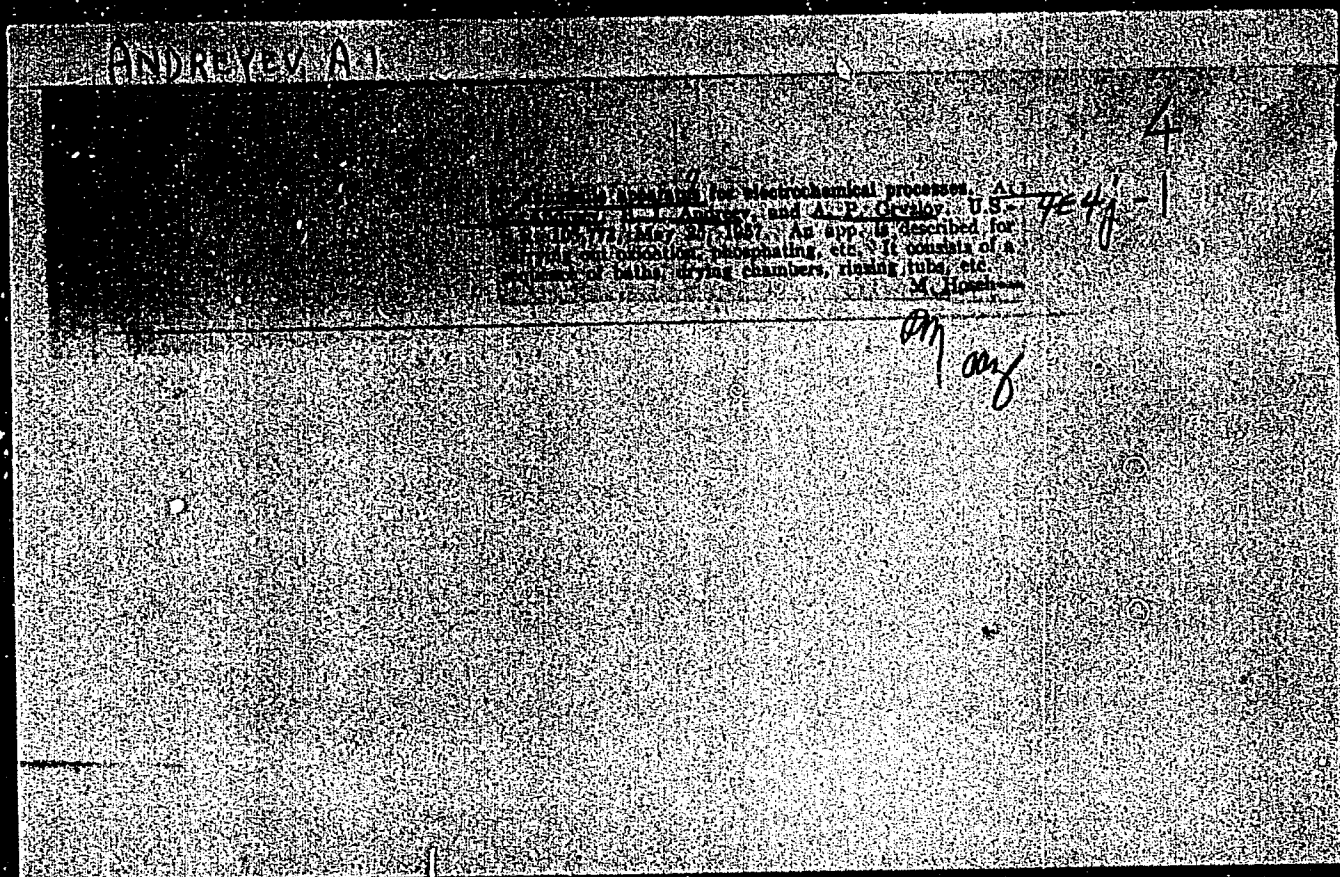
Reflection of the process of rapid eating on cardiovascular activity.

Med. sestra 19 no. 10:37-39 0 '60. (MIRA 13:10)

(DEGLUTITION) (CARDIOVASCULAR SYSTEM)

ANDREYEV, A.I. (Sofiya)

Effect of various psychological excitations on cardiovascular
activity in the acute period of rheumatic fever. *Pediatrics* 38
no.8:37-40 Ag '60. (MIRA 13:12)
(RHEUMATIC FEVER) (CARDIOVASCULAR SYSTEM)



ANDREYEV, A.I.

Instrument for determining the shrinkability of textile fabrics.
(MIRA 11:4)

Leg. prom. 18 no.3:53 Mr '58.

(Textile fabrics--Testing)

MINKIN, Anatoliy Samuilovich, kand. tekhn. nauk; GLAUBERZON, Yevgeniy Mironovich; ANDREYEV, A.I., red.; FREGER, D.P., red. izd-va; GVIRTS, V.L., tekhn. red.

[Repair and operation of certain kinds of machines and electric equipment at garment factories in Leningrad] Remont i eksploatsiia nekotorykh vidov tekhnologicheskogo i elektrotekhnicheskogo oborudovaniia na shveinykh fabrikakh Leningrada; obzor. Leningrad, 1961. 87 p. (MIRA 14:7)

(Leningrad—Clothing industry)

ANDREYEV, A.I.

Marine diesel-electric 2,000 horsepower rescue tug "Atlant." Biul.
tekh.-ekon.inform. no.5:58-60"160. (MIRA 14:3)
(Tugboats)

ANDREYEV, A.I.

LOMONOSOV, M.V. [deceased]; VAVILOV, S.I. [deceased], akademik, redaktor;
KRAVETS, T.P., redaktor; VINOGRADOV, V.V., akademik, redaktor;
TOPCHIEV, A.V., akademik, redaktor; BARKHUDAROV, S.G., redaktor;
ANDREYEV, A.I., redaktor; BLOCK, G.P., redaktor; KNYAZEV, G.A.,
redaktor; CHENAKAL, V.L., redaktor; SHAFRANOVSKIY, I.I., redaktor

[Complete works] Polnoe sobranie sochinenii. Moskva, Izd-vo Akad.
nauk SSSR. Vol.5. [Works in mineralogy, metallurgy, and mining,
1741-1763] Trudy po mineralogii, metallurgii i gornomu delu.
1741-1763 gg. 1954. 746 p. (MLRA 8:1)

1. Chlen-korrespondent AN SSSR (for Kravets, Barkhudarov)
(Mineralogy) (Metallurgy)

ANDREYEV, A.I.

LOMONOSOV, M.V.; VAVILOV, S.I., akademik, redaktor; KRAVETS, T.P., redaktor; VINOGRADOV, V.V., akademik, redaktor; TOPCHIIYEV, A.V., akademik, redaktor; BARKHUDAROV, S.G., redaktor; ANDREYEV, A.I., redaktor; BLOK, G.P., redaktor; YRLISEYEV, A.A., redaktor; KNYAZEV, G.A., redaktor; CHENAKAL, V.L.; PEVZNER, R.S., tekhnicheskiiy-redaktor

[Complete collected works] Polnoe sobranie sochinenii. Moskva, Izd-vo Akademii nauk SSSR. Vol.4. [Works on physics, astronomy, and instrument construction, 1744-1765] Trudy po fizike, astronomii i priborostroeniiu 1744-1765 gg. 1955. 830 p. (MLRA 8:6)

1. Chlen-korrespondent Akademii nauk SSSR (for Kravets, Barkhudarov). (Physics) (Astronomy) (Instruments)

ANDREYEV, A. I.

USSR

The question of the energy levels of helium-like atoms.
A. I. Andreyev, *Vestnik Moshov. Univ. 9, No. 5, Ser. Fiz.-Mat. i Estestven. Nauk* No. 3, 85-9 (1954).—An approx. solution of the relativistic wave equation for helium-like atoms is given where terms of order v^2/c^2 are retained, and higher-order terms in v/c are omitted. An expression for the binding energy is obtained which contains both the relativistic and the spin corrections. It is pointed out that in earlier papers on the subject a spin-dependent term has been overlooked. If this term is taken into consideration, one obtains for the ionization potential of He the theoretical value 0.90352 in units of $e^2/mc^2 = 4\pi me^2/\hbar^2$. In satisfactory agreement with the exptl. value 0.90351 ± 0.00004 . For Li^+ and Be^{++} the theoretical and the exptl. values are 2.77930, 5.65454, and 2.77999 \pm 0.00050; 5.65382 \pm 0.00400, resp.
E. Gora.

Chair of Theoretical Physics, Moscow State U.

ANDREYEV, A. I.

ANDREYEV, A. I.: "On the theory of acoustic oscillations in quantum mechanics".
Moscow, 1955. Min Education RSFSR. Moscow Oblast Pedagogical Inst.
(Dissertations for the degree of Candidate of Physicomathematical Sciences.)

SO: Knizhnaya Letopis' No. 50. 10 December 1955. Moscow.

S/124/61/000/012/018/038
D237/D304

AUTHOR: Andreyev, A. I.

TITLE: On the equations of classical hydrodynamics
in 1st and 2nd approximations

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 12, 1961,
50, abstract 12B322 (Uch. zap. Mosk. obl. ped.
in-ta, 1960, 92, 151-159)

TEXT: Continuity equations and impulse equations of viscous
fluid are linearized by expanding the density ρ and velocity
component v_μ into the series of form:

$$\rho = \rho_0 + \rho_1 + \rho_2 + \dots, \quad v_\mu = v_{\mu 0} + v_{\mu 1} + \dots$$

and are given in 1st and 2nd approximations. The origin of
acoustic pressure $P = \rho_0 v_{0\mu}^2$ which coincides with electro-

Card 1/2

On the equations of...

S/124/61/000/012/018/038
D237/D304

magnetic pressure in Maxwell's equations is discussed. [Ab-
stracter's note: Complete translation.] ✓

Card 2/2

L 19315-63 EWT(d)/FCC(w)/BDS AFFTC/IJP(C) 53
ACCESSION NR: AR3005866 S/0271/63/000/007/B021/B021

SOURCE: RZh. Avtomatika, telemekhanika i vy*chislitel'naya tekhnika, Abs. 7 B100

AUTHOR: Andreyev, A. I.

TITLE: Devices for determining the distribution function of random processes

CITED SOURCE: Tr. Leningr. korablestroit. in-ta, vy*p. 38, 1962, 231-235

TOPIC TAGS: discriminator, distribution function, random process

TRANSLATION: A differential or amplitude-slot discriminator for obtaining a differential probability distribution law is examined. The device has two channels; both operate on the same slot, which produces corresponding relative accuracy when two random processes are investigated simultaneously. A block diagram is presented. Voltages which modulate (in modulators) gating pulses produced by a generator are applied to the inputs. The gate generator operates simultaneously on two channels, with gating pulses alternating on each channel. The pulses go from the modulators to a mixer, then from the mixer load to trigger circuits. The critical level is established by means of a special divider. The width of the slot is stabilized by a bridge circuit. A signal appears at the output of the anti-coincidence circuit

Card 1/2

L 19315-63

ACCESSION NR: AR3005866

only when the amplitude of the pulses is within an interval equal to the difference of the critical thresholds of the trigger circuits. There is a switching device which ensures distribution of gating pulses to the channels. The number of signal pulses n_1 which strike the slot on the first channel is fixed by the memory unit of the first channel and the number of pulses on the second channel n_2 is fixed by the memory unit of the second channel. The total number of pulses m which have been modulated is fixed in the memory unit. The distribution function is taken at points, since this procedure produces highest accuracy. The device described here permits investigation of signals with an amplitude of 0 to 150 volts, the range of investigated frequencies is from 1 cps to 100 kc, the frequency of the gating pulses is 50 kc, and the pulse duration is 1 microsecond. Yu. U.

DATE ACQ: 15Aug63

SUB CODE: GE, MM

ENCL: 00

Card 2/2

ANDREYEV, A.I.; SHISHKINA, Ye.Ya., veterin.vrach; GULIYEV, M.A., veterin.vrach;
DUBAKIN, N.I.; FOMINA, A.Ya., kand.veterin.nauk; SOKKAR, I.M.Kh.,
aspirant; KUZ'MIN, V.V., prof.; TSYGENBORD, O.A., veterin.vrach

Laboratory practice. Veterinariia 40 no.7:66-76 J1 '63.

(MIRA 16:8)

1. Direktor Akhtyrskoy mezhrayonnoy veterinarnoy laboratorii, Sumskaya obl. (for Andreyev).
 2. Vsesoyuznyy institut eksperimental'noy veterinarii (for Shishkina, Fomina, Sokkar).
 3. Respublikanskaya veterinarnaya laboratoriya Gruzinskoy SSR (for Guliyev).
 4. Moskovskaya oblastnaya veterinarnaya laboratoriya (for Dubakin).
 5. Leningradskiy veterinarnyy institut (for Kuz'min, TSygenbord).
- (Veterinary medicine)

L 30003-65 EWT(1)/EWP(m)/EPT(n)-2/EWA(d) Pd-1/Pu-1 WW
 ACCESSION NR: AR4046881 S/0124/64/000/009/B047/B047

SOURCE: Ref. Zh. Mekhanika, Abs. 9B282

AUTHOR: Andrevey, A. I., Krazochkin, R. V.

TITLE: One accurate solution to a complete system of hydrodynamic equations

CITED SOURCE: Sb. Materialy 2 Konferentsii po probl. Vzaimodeystviye atmosf. i gidrosf. v sev. chasti Atlant. okeana, L., Leningr. un-t, 1964, 105-113

TOPIC TAGS: hydrodynamics, hydrodynamic equation, thermal disturbance, streamline flow

TRANSLATION: An accurate solution is presented to the following problem

$$\eta \frac{\partial^2 v}{\partial x_2^2} + \frac{\partial \eta}{\partial x_2} \frac{\partial v}{\partial x_2} = 0 \quad (1)$$

$$\rho p + \frac{\partial p}{\partial x_2} = 0 \quad (2)$$

$$\eta \frac{\partial^2 T}{\partial x_2^2} + \frac{\partial \eta}{\partial x_2} \frac{\partial T}{\partial x_2} + \eta \left(\frac{\partial v}{\partial x_2} \right)^2 = 0 \quad (3)$$

Cord 1/3

L 30003-65

ACCESSION NR: AR4046881

for boundary conditions

$$x_1=0, v=v_0, \rho=\rho_0, T=T_0 \quad (4)$$

$$x_1=-H, v=0, T=T_H \quad (5)$$

and the following assigned values of ρ , η , and χ

$$\rho=\rho_0 e^{-\alpha x_1}, \eta=\eta_0 e^{-\beta x_1}, \chi=\chi_0 e^{-\gamma x_1} \quad (6)$$

Here, x_1 and x_2 are coordinates; the x_1 axis runs horizontally, the x_2 axis vertically upward; v = velocity component along axis x_1 , ρ = density, g = acceleration due to gravity, χ = coefficient of heat conductivity, η = coefficient of viscosity, T = temperature. The solution of the problem assumes the form

Card... 2/3

L 30003-65

ACCESSION NR: AR4046881

$$v = \frac{v_0}{1 - e^{-\beta H}} (e^{\beta x_1} - e^{-\beta H}) \quad (7)$$

$$\rho = \rho_0 + \frac{\rho_0 g}{\alpha} (e^{-\alpha x_1} - 1) \quad (8)$$

$$T = \frac{1}{1 - e^{-\gamma H}} \left[T_0 - T_H + \frac{\eta_0}{\kappa_0} \frac{\beta}{\beta + \gamma} v_0^2 \frac{1 - e^{-(\beta + \gamma)H}}{(1 - e^{-\beta H})^2} \right] e^{\gamma x_1} - \frac{\eta_0}{\kappa_0} \frac{\beta}{\beta + \gamma} \frac{v_0^2}{(1 - e^{-\beta H})^2} e^{(\beta + \gamma)x_1} - \frac{1}{1 - e^{-\gamma H}} \left[T_0 e^{-\gamma H} - T_H + \frac{\eta_0}{\kappa_0} \frac{\beta}{\beta + \gamma} v_0^2 \frac{e^{-\gamma H}}{1 - e^{-\beta H}} \right] \quad (9)$$

Values for the heat flux vector, energy flux density vector and momentum flow density tensor were computed on the basis of equations 7 through 9. The derived solution corresponds in its physical sense to a streamline flow of liquid along axis x_1 , resulting from a constant surface force (stipulating an exponential variation of the liquid's heat conductivity and viscosity with depth). The authors also consider a problem on heat wave propagation in liquids at rest and calculate a trajectory for the travel of thermal disturbances in sea water. V.M. Kamenkovich.

Cord 3/3

SUB CODE: ME

ENCL: 00

ANDREYEV, A. I.

(DECEASED)

1963/2

c' 1959

GEOGRAPHY

see ILC

ANDREYEV, A.K.

Muscle amylase in fishes [with summary in English]. Biokhimiia
23 no.6:899-903 N-D '58 (MIRA 11:12)

1. Vysshiiy institut narodnogo khozyaystva Varna, Bolgariya.
(AMYLASE)
(FISHES--PHYSIOLOGY)

ANDREYEV, A.K.

Muscle maltase in fishes. Dokl. AN SSSR 152 no.2:464-466 S '63.
(MIRA 16:11)

1. Vysshiy institut narodnogo khozyaystva, Varna, Bolgariya.
Predstavleno akademikom A.I. Oparinym.

*

ANDREYEV, Aleksey Kus'mich; LEVCHUK, Igor' Vasil'yevich; PAVPEROV, V.,
red.; TELEGINA, T., tekhn.red.

[Differential credit and payment system; from the work practice
of State Bank branches in Ryazan Province] Differentsirovannyi
rezhim kreditovaniia i raschetov; iz opyta raboty uchrezhdenii
Gosbanka Riazanskoi oblasti. Moskva, Gosfinizdat, 1959. 51 p.
(MIRA 13:4)

(Ryazan Province--Banks and banking)

ADDITIONAL (MOSKVA)

There is a strong possibility that the Soviet Union will
be able to do this. (MOSKVA 18.1)

ANDREYEV, A.L.

On the treatment of epilepsy by the method of E.I. Karmanova. Zh. Nevro-
pat. Psikhiat., '52, 52, no.1, 34-38. (MLRA 5:2)
(PsA 27, no.11:7967 '53)

AMENOV, A. I.

Reorganization of therapeutic measures at the N. P. Pashchenko Hospital in accordance with Pavlov's theory. Zhur. nevr. i psikh. [Leningrad], no. 3, 1951.

GP: 11111. November 1951

ANDREYEV, A.L.

~~ANDREYEV, A.L.~~
P.P.Kashchenko; on the 35th anniversary of his death. Zhur.nevr.
i psikh. 55 no.2:149-150 F '55. (MLRA 8:4)
(KASHCHENKO, P.P., 1858-1920)

ANDREYEV, A. L.

✓ The treatment of psychiatric cases with Valparin. A. L. Andreyev (Kashchenko Psychoneurological Hosp. No. Moscow). *Zhur. Nevropatol. i Psikhiatr. im. Korotkova* 56, 294-5 (1956). The drug was administered to a total of 5-6 mg./day. Courses of therapy lasted 2 weeks to 3 months with an av. of 39.4 days. There was a lowering of the max. and min. arterial pressure, a rise in the hemoglobin of 10-20% and an increase in the no. of erythrocytes and leucocytes. No changes were observed in the other morphological elements of the blood. No specific changes were observed in the nature of the sugar and adrenaline curves, nor in the acids of the blood or urine. A considerable lowering in the O₂ depletion coeff. was noted. B. S. Levine

ANDREYEV, A.I.

Development of cerebral rheumatism in a 7-year-old child. *Pediatrics*
39 no.3:83-84 My-Je '56. (MLRA 9:9)

1. Iz 2-y Sofiyskoy gorodskoy bol'nitsy (Bolgariya)
(RHEUMATISM, compl.
encephalitis & endocarditis in child)
(ENCEPHALITIS, etiol. and pathogen.
rheumatism in child, with endocarditis)
(ENDOCARDITIS, etiol. and pathogen.
rheumatism in child, with encephalitis)

ANDREYEV, A.L.

[Therapeutic use of amino acids in the treatment of neuropsychic diseases] Lechebnoe primeneniye aminokislot pri nervno-psikhicheskikh zabolevaniyakh. Moskva, 1957. 44 p. (MIRA 11:6)
(AMINO ACIDS) (NERVOUS SYSTEM--DISEASES)

ANDREYEV, A.L. (Moskva)

P.P. Kashchenko and his role in Russian psychiatry. Zhur. nevr. i
psikh 59 no.3:357-359 '59. (MIRA 12:4)

(BIOGRAPHIES,

Kashchenko, p.p. (Rus))

(PSYCHIATRY,

contribution of P.P. Kashchenko (Rus))

ANDREYEV, A. L., Doc Med Sci -- (diss) "Rheumatic epilepsy." Moscow-Leningrad, 1960. 14 pp; (Leningrad State Order of Lenin Inst of Advanced Training of Physicians im S. M. Kirov, from the Moscow Psychoneurological Hospital im P. P. Kashchenko); 300 pp; price not given; list of author's work at end of text (11 entries); (KL, 27-60, 158)

ANDREYEV, Aleksandr Lavrent'yevich

[Epilepsy, its treatment and prevention] Epilepsia, ee lechenie
i profilaktika. Moskva, Medgiz, 1960. 29 p.

(EPILEPSY)

(MIRA 13:11)

ANDREYEV, Aleksandr Lavrent'yevich, red.

[Problems in the clinical aspects and treatment of mental illness]
Voprosy kliniki i terapii psikhicheskikh zabolevani. Moskva, 1960.
578 p. (MIRA 14:7)

(MENTAL ILLNESS)

ANDREYEV, A.L.; MIKHAYLOV, A.K.

"Problems in the clinical aspects and pathophysiology of epilepsy"
by S.F.Semenov. Reviewed by A.L.Andreev, A.K.Mikhailov. Zhur. nevr.
i psikh. 60 no.11:1544-1545 '60. (MIRA 14:5)
(EPILEPSY) (SEMENOV, S.F.)

ANDREYEV, A.L., doktor med. nauk, otv. red.; IVANOV, D.D., kand. med. nauk,
zam. otv. red.;

[Chemical and morphological bases of biogenic treatment for nervous
and mental diseases] Khimio-morfologicheskie osnovy biogennoi terapii
nervno-psikhicheskikh zabolevanii. Moskva, Mosk. nauchn. ob-vo
nevropatologov i psikhiatrov. Vol.1. 1961. 183 p. (MIRA 14:8)
(MENTAL ILLNESS) (TISSUE EXTRACTS) (~~PROTEINS~~-THERAPEUTIC USE)

S/762/61/000/000/025/029

AUTHOR: Andreyev, A. L.

TITLE: Casting procedure for large titanium-alloy ingots.

SOURCE: Titan v promyshlennosti; sbornik statey. Ed. by S. G. Glazunov.
Moscow, 1961, 266-274.

TEXT: The paper describes the experimental casting of several batches of ingots 460-mm diam (gross weight 1,250 kg) and 620-600-mm diam (GW 2,000 kg) in existing arc furnaces of the ЦЭП-334 (TsEP-334) type and ad-hoc built welded Cu crystallizers 470 and 630 mm (later reduced) diam. ГПН-550 (GPN550) generators were used. The procedure employed 200-mm diam 250-kg pressed electrodes in a first remelt to 380-mm diam, a second remelt to 460-mm diam, and a third remelt to 620-mm diam. Use of a single generator (6,500 a, 27-28 v) required appx. 11 hrs for a large remelt, and the resulting quality was unsatisfactory. With two GPN-550 generators in parallel and improved short-circuit protection, 12,000 a at 32-35 v became available, and 620-mm remelts were performed in about 6 hrs, including the time required to eliminate the shrinkage cavity. Maintenance of constant current intensity permitted operation at lower voltage, with reduced electrode voltage losses, reduced linear rate of fusion with increasing diameter, and quieter fusion, which in turn permitted the use of smaller arc gaps without fear of short circuits otherwise evoked by splashing. The fusion-weight rate is directly proportional to the current. At first, the magnetic field created by the positive bus

Card 1/2

Casting procedure for large titanium-alloy ingots.

S/762/61/000/000/025/029

deflected the arc off center; the resulting asymmetry of the melting process was eliminated by placing a steel shielding over the solenoid. The quality efficiency (in terms of the total weight cast) was 89.9% in 600-mm diam ingots. The specific power consumption (kwh/kg) and efficiency ($30.9W/IV$, where W is the fusion weight rate) for various melts are tabulated. **Conclusions:** The magnitude of the arc gap and the voltage at which a stable operation of the fusion is achieved, increase with increasing linear fusion rate and with decreasing electrode diameter. The weight rate in a steady-state fusion process increases comparatively little with decreasing length of the melting electrode; only during the initial, unsteady, process period is the fusion rate significantly smaller, especially with ingots of large size. The mean weight rate of fusion is determined by the current intensity and depends but little on the diameter of the ingot (the rate of fusion of 460-mm diam ingots is some 10% greater than that of 380-mm diam ingots from a 280-mm diam electrode, but the rate of fusion of 620-mm diam ingots is 10% smaller because of the time consumed during the initial fusion period). The furnace efficiency in the smelting of 460-mm diam ingots is 5.5% higher than during the smelting of 380-diam ingots. The furnace efficiency decreases and the specific power consumption increases with increasing difference between electrode diam and ingot diam; this is attributed to increased heat losses and the increased duration of the initial, unsteady, process period occasioned by the increased electrode diam. There are 6 figs. and 2 tables. **ASSOCIATION:** None given. **No references.**

ANDREYEV, A.L.

Safety in the vacuum arc melting of titanium. TSvet.met. 38
no.3:90-93 Mr '65.

(MIRA 18:6)

ANDREYEV, A.M.; BOLOTOV, A.A.; LUKASHEV, A.A.

Synchronizing and velocity control circuits for mirror-scanning
motion-picture cameras. Prib. i tekhn. eksp. 8 no.3:136-139
My-Je '63. (MIRA 16:9)
(Motion-picture cameras)

ANDREYEV, A.M.; GLUKHEKH, V.P.; KARASEV, B.G.

Principles of rational design of d-c electromagnetic pumps.
Mag. gidr. no.3:114-120 '65.

(MIRA 18-10)

ANDREYEV, A.M.; NIKITIN, A.M., inzh., retsenzents; PETUKHOVA, G.N.,
red.izd-va; DEMKINA, N.F., tekhn. red.

[Planning and organization of work according to a
schedule; practice of machinery manufacturing enterprises]
Planirovanie i organizatsiia raboty po grafiku; opyt ma-
shinostroitel'nykh predpriatii. Moskva, Mashgiz, 1963.
161 p. (MIRA 17:2)